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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,685	08/09/2006	Nigel Paul Maynard	65501-002US1	8586
69713 7590 02/03/2010 OCCHIUTI ROHLICEK & TSAO, LLP 10 FAWCETT STREET CAMBRIDGE, MA 02138				
EXAMINER LEONG, NATHAN T				
ART UNIT 1792		PAPER NUMBER		
NOTIFICATION DATE 02/03/2010		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

INFO@ORTPATENT.COM

Office Action Summary

Application No.

10/539,685

Applicant(s)

MAYNARD, NIGEL PAUL

Examiner

NATHAN T. LEONG

Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/22)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: 12/29/2006 and 2/21/2006

DETAILED ACTION

Election Acknowledged

Applicant's election of Group I, claims 1-30 in the reply filed on 10/14/2009 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Therefore, the election is deemed proper and made FINAL.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 6-9, 12-16, and 24-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Elder US 6345450.

Per claim 1, Elder teaches the process of heating green wood (considered as lumber, see col. 1, lines 38-45), and applying a composition (cooling fluid) at a temperature below that of the target zone of the substrate (see abstract). The composition is applied at a temperature below that of the target zone of the substrate (col. 9, lines 5-10). Per claims 2-4, Elder teaches the substrate to be lumber (see col. 1, lines 38-45).

Per claim 6, it would be inherent that the lumber contain a certain level of moisture, since the process teaches further drying the lumber. Per claim 7, Elder

teaches maintaining the elevated temperature for a period prior to application of the composition (col. 8, lines 40-50). Per claim 8, Elder teaches controlling the moisture loss from the target zone (col. 8, lines 29-35). Per claim 9, Elder teaches heating the substrate to a uniform temperature (col. 8, lines 45-47). Per claim 12, Elder teaches using a heating fluid (col. 8, line 55-60). Per claims 13 and 14, Elder teaches the heating fluid to be heated water (col. 8, lines 58-60). Per claim 15, Elder teaches the heating fluid to be steam (col. 9, lines 58-60). Per claim 16, Elder teaches using saturated steam (col. 11, line 34).

Per claim 24, Elder teaches applying the composition under a vacuum or negative pressure (col. 11, lines 5-8). Per claim 25, Elder teaches the composition being applied in the presence of ambient air (therefore inherently at ambient temperature). Per claim 26, Elder teaches pressure conditions controlled during the heating step, in the heating chamber (col. 11, lines 5-8).

3. Claims 1-3, 6, 18-19, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Hager US 4287239.

Per claims 1 and 27, Hager teaches delivering a composition to a substrate (see abstract). Hager teaches the option of first pre-heating a target zone of a substrate (col. 6, lines 7-20). Therefore, the composition would be deposited at a lower temperature than the target substrate, since the substrate was preheated. Per claims 2-3, Hager teaches using wood as the substrate. Per claim 6, Hager teaches the substrate to be eventually dried (col. 1, lines 60-68). Per claim 18, the preservative taught by Hager is

considered a biocidal composition, since Hager teaches that it protects against wood-destroying organisms (see col. 1, lines 65-68). Per claim 19, Hager teaches a preservation composition, which would therefore increase the strength of the substrate (see abstract).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 11 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hager US 4287239.

Per claim 11, Hager is silent regarding a temperature differential of at least approximately 80 degrees Celcius. However, Hager teaches that the temperature at which the substrate is pre-heated largely influences the penetration of the preservative into the wood (col. 6, lines 7-15). Therefore, since the temperature at which the substrate is pre-heated is a result-effective variable, one skilled in the art would be able

to optimize the temperature at which the substrate is pre-heated (and inherently the difference between the composition application temperature and substrate) to yield the best results via routine experimentation (see MPEP 2144.05).

Per claims 28-30, although Hager is silent regarding using the specific substrates, it would be obvious to one skilled in the art to choose a specific type of wood, such as freshly sawn lumber or milled lumber, or kiln dried lumber, to perform said preservation method on, since all wood would benefit from receiving such a preservation method.

7. Claims 7, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hager US 4287239 in view of Seidner US 5447686.

Per claims 7, 9, and 10, Hager teaches pre-heating the substrate prior to application of the composition but is silent as to heating the substrate to a uniform temperature sufficient to sterilize it. However, Seidner teaches a treatment process of heating lumber/wood, maintaining it at a temperature for a certain amount of time to sterilize the wood from pests (see abstract, and col. 3, lines 30-54). It would be obvious to one skilled in the art at the time of the invention to have used the method taught by Seidner to sterilize the substrate because Seidner teaches that pests or undesired fungi may be present in wood (see col. 1, lines 15-40).

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hager US 4287239 in view of Vinden et al US 6596975.

Although Hager is silent as to using microwave or frequency energy to heat the substrate, Vinden teaches a similar process of treating wood and using microwave frequency to heat it. It would be obvious to one skilled in the art to alternatively use microwave frequency to heat the substrate because Vinden teaches that microwave frequency when used, can increase the permeability of the wood (see abstract).

9. Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hager US 4287239 in view of Sturm US 5468284.

Hager is silent regarding treatment with a waterproofing composition. Per claim 20, Sturm teaches treating wood with a water proofing composition (see abstract), that is of a polymeric nature (see abstract), and the solution is aqueous (see abstract). Sturm further teaches that the composition can be applied by various means, such as spraying or dipping (col. 2, lines 37-40). It would be obvious to one skilled in the art to have used the composition taught by Sturm in the process of Hager because Sturm teaches advantages to the composition such as anti-stain and anti-decay waterproofing (see abstract).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN T. LEONG whose telephone number is (571)270-5352. The examiner can normally be reached on Monday to Friday, 9:00am to 6:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571)272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NATHAN T LEONG/
Examiner, Art Unit 1792

/Timothy H Meeks/
Supervisory Patent Examiner, Art Unit 1792